Message

From: DeSantis, Mike [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=674933A233B24AC88C74508EC930B5F6-DESANTIS, MIKE]
Sent: 6/18/2020 5:42:38 PM
To: Schock, Michael [schock.michael@epa.gov]; Tully, Jennifer [Tully.Jennifer@epa.gov]; Lytle, Darren [Lytle.Darren@epa.gov]
Subject: Some Peotone x-section photos
Attachments: ILPEMAN1-Pb_01.jpg; ILPEMAN1-Pb_02.jpg; ILPEMAN1-Pb_03.jpg; ILPEMAN1-Pb_04.jpg; ILPEMAN1-Pb_05.jpg; ILPEMAN1-Pb_06.jpg

I took these today using my microscope/camera setup here at home. The camera software is somewhat clunky. White balancing is particularly difficult. All that said, I just wanted to share these, so you could see the layering.

So, there is the light-colored outer layer, with the botryoidal 'look'. It is definitely crystalline, but I haven't been able to ID the peaks on the XRD pattern. Jennifer's initial look on the SEM indicated that the elemental makeup is mainly P, Fe, Mg, and Ca, with a bit of Si, Al, and K.

Underneath this is an orange-colored layer. Probably contains Fe, but we don't have any data yet. Note also the local inner pockets lined with additional white/grey-colored material. I'm guessing that none of this stuff contains much in the way of crystalline lead solids (the outer layer does not).

The two lowest layers are really thin, right against the pipe wall. These are likely crystalline Pb solids. There is a thin light colored layer (Pb carbonate? phosphate?) overlying an obvious PbO layer.

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